

**UNITED STATES DISTRICT COURT
DISTRICT OF MINNESOTA**

IN RE PORK ANTITRUST LITIGATION

This Document Relates To:

THE DIRECT PURCHASER
PLAINTIFF ACTION

Case No. 18-cv-01776-JRT-JFD

Honorable John R. Tunheim

**DEFENDANTS' REPLY
MEMORANDUM OF LAW IN
SUPPORT OF THEIR MOTION TO
EXCLUDE THE EXPERT REPORT
AND TESTIMONY OF DR. RUSSELL
MANGUM**

TABLE OF CONTENTS

TABLE OF AUTHORITIES.....	iii
INTRODUCTION	1
ARGUMENT	2
I. Dr. Mangum’s Regression Analysis Is Incapable of Showing That All or Nearly All Direct Purchasers Were Impacted During the Class Period.....	2
II. Dr. Mangum’s Inclusion of 2008 in the Benchmark Period of His Regression Skews His Models’ Results and Is Contrary to Settled Economic and Legal Principles	4
III. Dr. Mangum Concedes Away Key Elements of His Market Characteristics Analysis	8
IV. Dr. Mangum’s Factual Narratives Channeling the DPPs’ Theories and Interpretations of Evidence Are Inadmissible	11
CONCLUSION.....	12

TABLE OF AUTHORITIES

	Page(s)
Cases	
<i>Best Pallets Inc. v. Brambles Indus., Inc.</i> , No. 08-2012, 2009 WL 10672543 (W.D. Ark. Aug. 17, 2009)	10
<i>Concord Boat Corp. v. Brunswick Corp.</i> , 207 F.3d 1039 (8th Cir. 2000)	9, 10
<i>Goldman v. Healthcare Mgmt. Sys., Inc.</i> , 559 F. Supp. 2d 853 (W.D. Mich. 2008)	4
<i>Gumwood HP Shopping Partners, L.P. v. Simon Prop. Grp., Inc.</i> , 221 F. Supp. 3d 1033 (N.D. Ind. 2016)	3, 4
<i>Halvorson v. Auto-Owners Ins. Co.</i> , 718 F.3d 773 (8th Cir. 2013)	3, 4
<i>Highland Cap. Mgmt., L.P. v. Schneider</i> , 379 F. Supp. 2d 461 (S.D.N.Y. 2005)	12
<i>In re Fla. Cement & Concrete Antitrust Litig.</i> , No. 09-23187-CIV, 2012 WL 27668 (S.D. Fla. Jan. 3, 2012)	9
<i>In re LIBOR-Based Fin. Instruments Antitrust Litig.</i> , 299 F. Supp. 3d 430 (S.D.N.Y. 2018)	9, 10
<i>In re Plastics Additives</i> , No. 03-CV-2038, 2010 WL 3431837 (E.D. Pa. Aug. 31, 2010)	9
<i>In re Pork Antitrust Litig.</i> , 495 F. Supp. 3d 753 (D. Minn. 2020)	8, 9
<i>In re Pre-Filled Propane Tank Antitrust Litig.</i> , No. 14-02567-MD-W-GAF, 2021 WL 5632089 (W.D. Mo. Nov. 2021)	4
<i>In re Wholesale Grocery Prods. Antitrust Litig.</i> , 946 F.3d 995 (8th Cir. 2019)	8
<i>In re Zurn Pex Plumbing Prods. Liab. Litig.</i> , 644 F.3d 604 (8th Cir. 2011)	10

<i>Persian Gulf Inc. v. BP West Coast Prods. LLC</i> , No. 15CV1749-JO-AGS, 2022 WL 4830698 (S.D. Cal. Sept. 30, 2022)	8
<i>Robroy Indus.-Tex., LLC v. Thomas & Betts Corp.</i> , No. 2:15-CV-512-WCB, 2017 WL 1319553 (E.D. Tex. Apr. 10, 2017).....	12
<i>Scott v. City of Sioux City, Iowa</i> , 68 F. Supp. 3d 1022 (N.D. Iowa 2014).....	3
Other Authorities	
American Bar Association, <i>Econometrics: Legal, Practical, and Technical Issues</i> (2d ed. 2014)	5
American Bar Association, <i>Proving Antitrust Damages: Legal and Economic Issues</i> (3d ed. 2017)	5
Phillip E. Areeda & Herbert Hovenkamp, <i>Antitrust Law: An Analysis of Antitrust Principles and Their Application</i> (Lexis 2022)	5

Defendants respectfully submit this reply memorandum of law in support of their motion to exclude the expert report and testimony of Dr. Russell Mangum.

INTRODUCTION

The Direct Purchaser Plaintiffs' opposition fails to rebut multiple independent grounds for excluding Dr. Mangum's testimony. The DPPs do not address the results of Dr. Mangum's regression analysis when applied to the Class Period, because they cannot counter Defendants' showing that his regression masks the presence of *hundreds* of uninjured class members, *at minimum*. And the DPPs provide no economic justification for Dr. Mangum's inclusion of 2008 in the benchmark period of his regression. They do not claim—as they must—that 2008 is economically comparable to the damages period, nor do they show that Dr. Mangum controlled for the historically unique industry events of 2008. Instead, the DPPs contend the Court should permit Dr. Mangum's inclusion of 2008 in his benchmark period because there was no anticompetitive conduct in 2008. But even if that alone could justify Dr. Mangum's benchmark (and it cannot), it would not help the DPPs here, because they allege there *was* anticompetitive conduct in 2008. Each issue—Class Period impact and benchmark selection—is an independent basis to exclude Dr. Mangum's testimony.

These deficiencies in Dr. Mangum's regression analysis should end the inquiry. The DPPs do not—and cannot—claim that Dr. Mangum's market characteristics and correlation analyses establish common impact without his flawed regression. Both are interpretive aids that courts hold do not demonstrate impact standing alone.

Much of the DPPs' opposition asserts that Defendants' arguments go to weight. But Defendants' authorities establish that the shortcomings in Dr. Mangum's report go squarely to admissibility. At base, the DPPs invite the Court to find that, because Dr. Mangum used methods generally employed in cases of this type, his testimony is admissible. In doing so, the DPPs ignore whether Dr. Mangum's methods were properly applied to the facts at issue and whether his testimony can reliably aid the Court's application of the criteria for class certification, given the state of the evidence after the close of fact discovery. The Court should decline the DPPs' invitation to examine Dr. Mangum's opinions with such limited scrutiny.

ARGUMENT

I. Dr. Mangum's Regression Analysis Is Incapable of Showing That All or Nearly All Direct Purchasers Were Impacted During the Class Period.

The DPPs do not dispute a core flaw in Dr. Mangum's regression analysis. When his methodology of estimating average overcharges across direct purchasers is allowed to vary across individual top direct purchasers, the *majority* of top direct purchasers sustained *no* positive and statistically significant overcharge during the Class Period. Haider Rpt. ¶ 146 & Ex. 31.

The DPPs and Dr. Mangum argue, without citing *any* legal authority, that they need not establish that direct purchasers were overcharged—and therefore impacted—during the Class Period. *E.g.*, Mangum Reply Report ¶ 132 (conceding damages model does not account for limitations period and claiming “it is inappropriate to impose a statistically and econometrically arbitrary limitation based on the statute of limitations period”).

The DPPs are wrong for at least two dispositive reasons. *First*, the DPPs seek to certify a class comprised of members who purchased pork products from Defendants “from June 29, 2014 through June 30, 2018.” DPP Class Cert. Memo. at 31. To certify *that* class, “*each member* must have standing and show an injury in fact that is traceable to the defendant and likely to be redressed in a favorable decision.” *Halvorson v. Auto-Owners Ins. Co.*, 718 F.3d 773, 778 (8th Cir. 2013) (emphasis added). So Dr. Mangum’s testimony—the DPPs’ only purported evidence of common impact—must show overcharges attributable to the alleged conduct for purchases that direct purchasers made between June 29, 2014 and June 30, 2018—*i.e.*, during the Class Period. But as Dr. Mangum concedes, his model makes no such distinction. Mangum Reply Report ¶ 132.

Second, courts in the Eighth Circuit and elsewhere reject Dr. Mangum’s *ipse dixit* that “it is inappropriate to impose a statistically and econometrically arbitrary limitation based on the statute of limitations period.” Mangum Reply Report ¶ 132. Dr. Mangum’s model calculates damages over the limitations period based on time-barred conduct, taking average overcharge rates calculated across a *decade-long* Alleged Conspiracy Period and multiplying them by Defendants’ sales during the *four-year* Class Period. Mangum Report ¶¶ 246, 257-58. This is improper, especially where, as here, there is no dispute the alleged conduct varied over time. Haider Report ¶ 108; Mangum Report ¶¶ 73-83; DPP Class Cert. Memo. at 3-28. When damages opinions fail to conform with the applicable statute of limitations, as Dr. Mangum’s does, courts exclude the opinions. *E.g.*, *Scott v. City of Sioux City, Iowa*, 68 F. Supp. 3d 1022, 1042 (N.D. Iowa 2014) (striking expert’s damages calculations to the extent they relied on conduct outside limitations period); *Gumwood HP*

Shopping Partners, L.P. v. Simon Prop. Grp., Inc., 221 F. Supp. 3d 1033, 1045 (N.D. Ind. 2016) (similar); *Goldman v. Healthcare Mgmt. Sys., Inc.*, 559 F. Supp. 2d 853, 861-63 (W.D. Mich. 2008) (similar).

At bottom, the DPPs fight any inquiry into whether Dr. Mangum has shown class members were impacted by the alleged conduct during the Class Period because the result of that inquiry is fatal. Dr. Mangum's methodology masks the presence of 350 of 694 top direct purchasers who suffered *no* positive, statistically significant overcharge *during the Class Period*. Open. Memo. at 19-23. So classwide impact *cannot* be proven with the same evidence—where that evidence is Dr. Mangum's regression analysis—because individualized inquiries are needed to determine whether any given direct purchaser was overcharged. *Id.* Put simply: “Because class certification requires that ‘each member of the proposed class have standing and show injury in fact,’ representative or aggregate evidence fails Rule 23 if it masks individualized issues or predicts injury where none otherwise exists.” *In re Pre-Filled Propane Tank Antitrust Litig.*, No. 14-02567-MD-W-GAF, 2021 WL 5632089, at *6 (W.D. Mo. Nov. 2021) (quoting *Halvorson*, 718 F.3d at 778 (cleaned up)). Dr. Mangum's regression models fail Rule 23 on both counts.

II. Dr. Mangum's Inclusion of 2008 in the Benchmark Period of His Regression Skews His Models' Results and Is Contrary to Settled Economic and Legal Principles.

The DPPs' attempted defense of Dr. Mangum's inclusion of 2008 in the benchmark period fails. They do not seriously address Defendants' main argument—resting not only on Defendants' experts, but also USDA economists—that 2008 was an extreme outlier in the pork industry. Open. Memo. at 15-17. Rather, the DPPs claim the events of 2008 are

inconsequential, so long as 2008 is free of alleged anticompetitive conduct. Opp. Memo. at 25.

But the question is *not* just whether 2008 was free of alleged anticompetitive conduct (although the DPPs *do allege anticompetitive conduct in 2008*, as detailed below). “Normal” means the benchmark period must be *economically comparable* to the damages period. *E.g.*, American Bar Association, *Econometrics: Legal, Practical, and Technical Issues* at 71 (2d ed. 2014) (“In using before-and-after models, the econometrician must consider whether there are other events that took place during or outside the time period of interest that may confound the econometrician’s measurement of the effects of primary interest to the analysis” including “whether the benchmark time period is truly representative and thus a proper benchmark”); American Bar Association, *Proving Antitrust Damages: Legal and Economic Issues* at 178-79 (3d ed. 2017) (as with the before-and-after approach, in a benchmark analysis, the “benchmark and affected markets should be characterized by sufficiently comparable economic conditions (at least after controlling for observable factors) such that prices in those markets would have been identical had there been no anticompetitive behavior”). Put differently, “the plaintiff must establish that its experience before the antitrust violation is a reliable predictor of its future experience” or else “damage estimates are apt to be rejected as speculative.” Phillip E. Areeda & Herbert Hovenkamp, *Antitrust Law: An Analysis of Antitrust Principles and Their Application* ¶ 392 (Lexis 2022).

The DPPs have not shown that 2008 is an appropriate benchmark under this standard. In 2008, pork demand was historically low in light of the Great Recession, hog

supply spiked unprecedentedly due to wide availability of the circovirus vaccine, and feed costs were historically high. Open. Memo. at 15-17. Dr. Mangum claims he could control for disruptive economic events of this nature, like COVID-19 and swine flu. Mangum Report ¶ 241 (noting inclusion of indicator variable purportedly corresponding with onset of COVID-19); ¶ 244 (noting inclusion of indicator variable purportedly corresponding with swine flu outbreak). And the DPPs say Dr. Mangum's model includes multiple such variables that account for the events of 2008. Opp. Memo. at 26 n.11. Yet neither the DPPs nor Dr. Mangum explain *how* they control for these events. And they demonstrably do not. For example, Dr. Haider has already shown that Dr. Mangum's GDP variable does not account for the historically weak demand in 2008. Haider Report ¶ 126 & n.239. Further, the DPPs have not established that Dr. Mangum's claimed measure of the piglet mortality rate—mirroring the other putative class experts (Mangum Reply Report ¶ 155)—accounts for the spike in hog supply caused by wide availability of the circovirus vaccine. Like the other putative class experts, Dr. Mangum uses mortality data from one Defendant—Seaboard—without explaining how that data is a suitable proxy for industry-wide impact, particularly given that Seaboard was never materially impacted by circovirus. *See* Reply Memo. in Support of Motion to Exclude Dr. Michael Williams at 9.

Ultimately, if Dr. Mangum's model accounted for the events of 2008, his overcharge results would not markedly change when Dr. Haider—using Dr. Mangum's model—controlled for 2008. But as Exhibit 23 of Dr. Haider's report makes plain, controlling for the events of 2008 has critical effects on *all* of the estimated overcharges:

EXHIBIT 23

ESTIMATED OVERCHARGES^{1,2}

FOR THE ALLEGED CONDUCT PERIOD AND THE PROPOSED CLASS PERIOD

USING DR. MANGUM'S REGRESSION

AND ACCOUNTING FOR INDUSTRY EVENTS IN 2008

JANUARY 2005 - DECEMBER 2020

Dr. Mangum's Overcharge Regression	Alleged Conduct Period ³ January 2009 - June 2018	Accounting for Industry Events in 2008	Accounting for Industry Events in 2008
		Alleged Conduct Period January 2009 - June 2018	Proposed Class Period July 2014 - June 2018
[a]	[b]	[c]	[d]
Bacon	13.9%*	-0.1%	-7.0%*
Belly	19.1%*	-0.3%	-17.1%*
Fresh Ham	4.7%*	-7.4%*	-3.3%*
Loin	4.3%*	-0.4%*	7.9%*
Ribs	8.0%*	1.0%*	5.3%*
Shoulder	11.5%*	6.8%*	15.7%*

Notes:

¹ * denotes that the overcharge percentage is statistically significant at the 5% level.

² Dr. Mangum's overcharge percentage is computed as $1 - 1/\exp(\text{overcharge coefficient estimate} - 0.5 * \text{std. error of overcharge coefficient}^2)$.

³ These are Dr. Mangum's estimated overcharges.

Source:

Dr. Mangum's turnover.

Haider Report ¶ 129 Ex. 23.¹

Moreover, the lack of economic comparability between 2008 and the damages period—and Dr. Mangum's failure to control for it—are not the only problems with including 2008 in the benchmark period. The DPPs also say 2008 is “a ‘clean’ period in which DPPs *do not* allege anticompetitive conduct.” Opp. Memo. at 25 (emphasis added). But this is false. The DPPs squarely allege that: “*Defendants’ conspiracy to restrict pork supply began in the last part of 2008.*” DPP Third Amended Compl. ¶ 134 (emphasis

¹ The version of Exhibit 23 reproduced here is from the Errata to Expert Report of Dr. Laila Haider, August 24, 2022, attached as Exhibit A to the Declaration of Christopher A. Smith, filed contemporaneously herewith. The errata version of Exhibit 23 shows decimal points that do not appear in the original version.

added). They further allege that three Defendants (Smithfield, Tyson, and Hormel) and a member of Triumph (Christensen Farms) cut sows in 2008. *Id.* ¶¶ 124, 125, 128, 130. And, in denying Defendants’ motion to dismiss, the Court relied on these very allegations, expressly noting that the DPPs’ “most specific allegations of herd-size reductions are against Smithfield, Tyson, and Triumph. *Those reductions all took place in 2008 and 2009*” *In re Pork Antitrust Litig.*, 495 F. Supp. 3d 753, 769 (D. Minn. 2020) (emphasis added).

The DPPs cannot have it both ways—a conspiracy that allegedly began and included anticompetitive conduct in 2008, to withstand a motion to dismiss, and a conspiracy that did not, to assess purported overcharges. The DPPs have therefore *not* “demonstrate[d] the veracity of the benchmark chosen” by Dr. Mangum. *In re Wholesale Grocery Prods. Antitrust Litig.*, 946 F.3d 995, 1002 (8th Cir. 2019); *see also Persian Gulf Inc. v. BP West Coast Prods. LLC*, No. 15CV1749-JO-AGS, 2022 WL 4830698, at *36 (S.D. Cal. Sept. 30, 2022) (excluding expert’s damages opinion because his methodology “disregarded the basic econometric principle of selecting a benchmark period that is reasonably free of misconduct”).

III. Dr. Mangum Concedes Away Key Elements of His Market Characteristics Analysis.

Dr. Mangum initially claimed that certain characteristics of the pork-packing market were conducive to forming and maintaining a conspiracy. Mangum Report ¶¶ 94-168. Defendants showed—through the report of Purdue University Agricultural Economics professor Dr. James Mintert—that Dr. Mangum’s analysis focused on the wrong market—

one far too narrow given the DPPs’ allegations—and that it ignored evidence demonstrating the market—however defined—does not possess numerous characteristics Dr. Mangum asserts. Plaintiffs cannot rely on an expert’s inaccurate description of the market to demonstrate common impact. *E.g., In re Fla. Cement & Concrete Antitrust Litig.*, No. 09-23187-CIV, 2012 WL 27668, at *11 (S.D. Fla. Jan. 3, 2012); *In re Plastics Additives*, No. 03-CV-2038, 2010 WL 3431837, at *7 (E.D. Pa. Aug. 31, 2010).

The DPPs offer no serious defense of Dr. Mangum’s analysis. They say, with no citation to their pleadings, that Dr. Mangum’s market focus is consistent with their case theory because “[t]he alleged conspiracy pertains to prices for pork” Opp. Memo. at 13. But the DPPs do not allege that Defendants fixed pork prices in a vacuum; rather, they allege Defendants did so by cutting sow and hog supply and increasing exports. *In re Pork Antitrust Litig.*, 495 F. Supp. 3d at 769-72 (holding DPPs plausibly alleged parallel conduct based on certain Defendants’ purported sow-herd reductions and others’ claimed increases in export sales); App’x A to Defs’ Sur-Reply Further Opposing Pltfs’ Class Cert. Motions at 1-6 (collecting DPPs’ allegations that conspiracy was effectuated through sow-herd reductions and increased pork exports).

Thus, any assessment of the market at issue must account for this supply chain as a whole—from hog production through to domestic and export sales—to be accurate *and* consistent with the DPPs’ theory of the case. Dr. Mangum’s market analysis fails on this score and should be excluded on this basis alone. *Concord Boat Corp. v. Brunswick Corp.*, 207 F.3d 1039, 1057 (8th Cir. 2000) (expert’s opinion in antitrust case must account for all aspects of economic reality of market); *In re LIBOR-Based Fin. Instruments Antitrust*

Litig., 299 F. Supp. 3d 430, 482-83, 489 (S.D.N.Y. 2018) (inconsistencies between plaintiffs’ experts and plaintiffs’ own allegations were one reason for excluding expert’s opinion because “[s]uch a misfit ... indicates a lack of reliability”).²

Next, the DPPs abandon elements of Dr. Mangum’s market characteristics analysis that Defendants showed to be suspect. For example, Dr. Mangum claimed Defendants are heavily involved in hog production via direct ownership and vertical integration, or via downstream-market buyer power. Mangum Report ¶ 108. Defendants showed each assertion to be dubious (at best). Open. Memo. at 28-33. And now Dr. Mangum says much of what he asserted before does not matter—that neither monopoly-level market share nor vertical integration nor direct ownership is necessary for Defendants to exert power over hog production. Mangum Reply Report ¶¶ 32, 35, 39. So Dr. Mangum’s opinion about these purported features of the market is irrelevant. If market power does not depend on the presence of these characteristics, they have no place in an accurate market assessment.

The DPPs also abandon Dr. Mangum’s theory of buyer power via contracting practices. They now simply speculate that, because Defendants are major hog purchasers, this “allowed them to exert significant power over pork supply.” Opp. Memo. at 16. They

² The DPPs attempt to distinguish *Concord Boat* fails because courts in the Eighth Circuit apply *Concord Boat* at class certification. *E.g.*, *Best Pallets Inc. v. Brambles Indus., Inc.*, No. 08-2012, 2009 WL 10672543, at *6-7, *11 (W.D. Ark. Aug. 17, 2009) (relying on *Concord Boat* in holding plaintiffs failed to establish predominance, because experts’ methodology did not account for market realities). In addition, there was no “material gap” in the evidence available to Dr. Mangum when he conducted his market analysis: class certification will be decided on a near-complete record, because fact discovery has closed. *Cf. In re Zurn Pex Plumbing Prods. Liab. Litig.*, 644 F.3d 604, 609, 614 (8th Cir. 2011) (affirming district court’s class certification focused *Daubert* analysis, where merits discovery had not commenced).

do not claim Defendants *did* exert such power, because that claim has no record support: There is no dispute that processors lack economic incentive to restrict hog supplies and, in fact, benefit from higher hog supplies. Mintert Report ¶¶ 80-96. Indeed, another putative class expert, Dr. Michael Williams, *agrees with Defendants*, that it is “true” processors prefer higher hog supplies, because it means they pay less for hogs and are therefore incentivized to “secure and maintain a steady, large supply of hogs.” Williams Reply Report ¶¶ 199-20 (quotations omitted).

Dr. Mangum’s walk-away from key elements of his market characteristics assessment leaves no fact disputes unripe for resolution on a *Daubert* motion. Regardless, Dr. Mangum’s assessment must be accurate to be relevant to establishing classwide impact, and it plainly is not.³

IV. Dr. Mangum’s Factual Narratives Channeling the DPPs’ Theories and Interpretations of Evidence Are Inadmissible.

Dr. Mangum’s anecdotal rhetoric goes far beyond attempts to understand and describe the industry. Open. Memo. at 8-11. He devotes numerous paragraphs of his report to reciting the DPPs’ claims of supply reduction, Mangum Report ¶¶ 74-83, even though he has no opinion there was a conspiracy to reduce the supply of pork, Mangum Dep. 147:13-24, and offers no opinion as to but-for levels of sow herds, hog production, or exports. Mangum Reply Report ¶ 82. And he devotes numerous paragraphs to purportedly illustrating Defendants’ use of Agri Stats, Mangum Report ¶¶ 148-57, even though he has

³ As for Dr. Mangum’s correlation analysis, Defendants have already noted the logical fallacy of inferring common impact from correlation alone. Open. Memo. at 36-37. The DPPs offer no counter.

no opinion Defendants used Agri Stats to facilitate the alleged conspiracy. Mangum Dep. 472:25-473:15.⁴

The DPPs have not shown how these narratives are pertinent to the opinions Dr. Mangum formed. Instead, he is “simply passing along information provided by others and laying out the [DPPs’] theory of the case.” *Robroy Indus.-Tex., LLC v. Thomas & Betts Corp.*, No. 2:15-CV-512-WCB, 2017 WL 1319553, at *3 (E.D. Tex. Apr. 10, 2017). These portions of Dr. Mangum’s report should therefore be excluded, because if the underlying facts are admissible, they are “properly presented through percipient witnesses and documentary evidence”—not Dr. Mangum. *Highland Cap. Mgmt., L.P. v. Schneider*, 379 F. Supp. 2d 461, 468-70 (S.D.N.Y. 2005) (expert testimony that “offers only factual narratives and interpretations of conduct or views as to the motivation of parties ... is inadmissible” (cleaned up)).

CONCLUSION

Wherefore, for the foregoing reasons and those set forth in Defendants’ opening memorandum, Dr. Mangum’s testimony should be excluded.

Dated: January 6, 2023

Respectfully submitted,

/s/ Christopher A. Smith

Aaron Chapin (#0386606)

Christopher A. Smith (*pro hac vice*)

Tessa K. Jacob (*pro hac vice*)

A. James Spung (*pro hac vice*)

Jason Husgen (*pro hac vice*)

Sarah L. Zimmerman (MDL registered)

⁴ Cited excerpts of the Deposition of Dr. Russell Mangum, July 13, 2022, are attached as Exhibit B to the Declaration of Christopher A. Smith, filed contemporaneously herewith.

Kate Ledden (MDL registered)
Tanner Cook (MDL registered)
HUSCH BLACKWELL LLP
190 Carondelet Plaza, Ste 600
St. Louis, MO 63105
Telephone: (314) 480-1500
aaron.chapin@huschblackwell.com
chris.smith@huschblackwell.com
tessa.jacob@huschblackwell.com
james.spung@huschblackwell.com
jason.husgen@huschblackwell.com
sarah.zimmerman@huschblackwell.com
kate.ledden@huschblackwell.com
tanner.cook@huschblackwell.com

Counsel for Triumph Foods, LLC

/s/ Mark L. Johnson

Mark L. Johnson (#0345520)
Davida S. McGhee (#0400175)
GREENE ESPEL PLLP
222 South Ninth Street, Suite 2200
Minneapolis, MN 55402
(612) 373-0830
mjohnson@greeneespel.com
dwilliams@greeneespel.com

Daniel Laytin, P.C. (*pro hac vice*)
Christa Cottrell, P.C. (*pro hac vice*)
Jenna Stupar (*pro hac vice*)
KIRKLAND & ELLIS LLP
300 North LaSalle
Chicago, IL 60654
(312) 861-2000
daniel.laytin@kirkland.com
christa.cottrell@kirkland.com
jenna.stupar@kirkland.com

***Counsel for Clemens Food Group, LLC
and The Clemens Family Corporation***

/s/ Craig S. Coleman

Richard A. Duncan (#0192983)
Aaron D. Van Oort (#0315539)
Craig S. Coleman (#0325491)
Emily E. Chow (#0388239)
Isaac B. Hall (#0395398)
FAEGRE DRINKER BIDDLE & REATH
LLP
2200 Wells Fargo Center
90 South Seventh Street
Minneapolis, MN 55402-3901
(612) 766-7000
richard.duncan@faegredrinker.com
aaron.vanoort@faegredrinker.com
craig.coleman@faegredrinker.com
emily.chow@faegredrinker.com
isaac.hall@faegredrinker.com

Jacob D. Bylund (*pro hac vice*)
Stephanie A. Koltookian (*pro hac vice*)
Robert C. Gallup (#0399100)
FAEGRE DRINKER BIDDLE &
REATH LLP
801 Grand Ave., 33rd Floor
Des Moines, IA 50309
(515) 248-9000

jacob.bylund@faegredrinker.com
stephanie.koltookian@faegredrinker.com
robert.gallup@faegredrinker.com

Jonathan H. Todt (*pro hac vice*)
FAEGRE DRINKER BIDDLE & REATH
LLP
1500 K Street NW, Suite 1100
Washington, DC 20005
(202) 842-8800
jonathan.todt@faegredrinker.com

John S. Yi (*pro hac vice*)
FAEGRE DRINKER BIDDLE & REATH
LLP
One Logan Square, Suite 2200
Philadelphia, PA 19103
(215) 988-2700
john.yi@faegredrinker.com

Counsel for Hormel Foods Corporation

/s/ Peter H. Walsh
Peter H. Walsh (#0388672)
HOGAN LOVELLS US LLP
80 South Eighth Street, Suite 1225
Minneapolis, MN 55402
(612) 402-3000
peter.walsh@hoganlovells.com

William L. Monts (*pro hac vice*)
Justin W. Bernick (*pro hac vice*)
HOGAN LOVELLS US LLP
Columbia Square
555 Thirteenth Street, NW
Washington, D.C. 20004
(202) 637-5600
william.monts@hoganlovells.com
justin.bernick@hoganlovells.com

Counsel for Agri Stats, Inc.

/s/ Tiffany Rider Rohrbaugh
Tiffany Rider Rohrbaugh (*pro hac vice*)
Rachel J. Adcox (*pro hac vice*)
Lindsey Strang Aberg (*pro hac vice*)
Allison Vissichelli (*pro hac vice*)
AXINN, VELTROP & HARKRIDER LLP
1901 L Street NW
Washington, DC 20036
(202) 912-4700
trider@axinn.com
radcox@axinn.com
lstrang@axinn.com
avissichelli@axinn.com

Jarod Taylor (*pro hac vice*)
AXINN, VELTROP & HARKRIDER LLP
90 State House Square
Hartford, CT 06103
(860) 275-8109
jtaylor@axinn.com

Craig M. Reiser (*pro hac vice*)
Kail Jethmalani (*pro hac vice*)
AXINN, VELTROP & HARKRIDER LLP
114 West 47th Street
New York, NY 10036
(212) 728-2200
creiser@axinn.com
kjethmalani@axinn.com

David P. Graham (#0185462)
DYKEMA GOSSETT PLLC
4000 Wells Fargo Center
90 South Seventh Street
Minneapolis, MN 55402
(612) 486-1521
dgraham@dykema.com

***Counsel for Tyson Foods, Inc., Tyson
Prepared Foods, Inc. and Tyson Fresh
Meats, Inc.***

/s/ Peter J. Schwingler
William L. Greene (#0198730)
Peter J. Schwingler (#0388909)
William D. Thomson (#0396743)
STINSON LLP
50 South Sixth Street, Suite 2600
Minneapolis, MN 55402
(612) 335-1500
william.greene@stinson.com
peter.schwingler@stinson.com
william.thomson@stinson.com

J. Nicci Warr (*pro hac vice*)
STINSON LLP
7700 Forsyth Blvd., Suite 1100
St. Louis, MO 63105
(314) 863-0800
nicci.warr@stinson.com

***Counsel for Seaboard Foods LLC and
Seaboard Corporation***

**UNITED STATES DISTRICT COURT
DISTRICT OF MINNESOTA**

IN RE: PORK ANTITRUST LITIGATION

Case No. 0:18-cv-01776-JRT-HB

This Document Relates To:

THE DIRECT PURCHASER
PLAINTIFFS ACTION

**WORD-COUNT COMPLIANCE
CERTIFICATE REGARDING
REPLY MEMORANDUM IN
SUPPORT OF MOTION TO
EXCLUDE THE EXPERT
REPORT AND TESTIMONY OF
DR. RUSSELL MANGUM**

I, Christopher A. Smith, hereby certify that the undersigned Defendants' Reply Memorandum in Support of Motion to Exclude the Expert Report and Testimony of Dr. Russell Mangum complies with the word-count limits in Local Rule 7.1(f), as modified by the Court's January 5, 2023 Order granting Defendants 1,500 additional words for each reply memorandum in support their motions to exclude Class Plaintiffs' experts (Dkt. 1723), and the type-size limits in Local Rule 7.1(h).

I further certify that, in preparation of the aforementioned memorandum, I used Microsoft Word 365, and that this word processing program has been applied specifically to include all text, including headings, footnotes, and quotations (but excluding the caption, signature block, table of contents, and table of authorities) in the following word count.

I certify that the aforementioned memorandum contains 3,114 words.

Dated: January 6, 2023

Respectfully submitted,

/s/ Christopher A. Smith

Aaron Chapin (#0386606)
Christopher A. Smith (*pro hac vice*)
Tessa K. Jacob (*pro hac vice*)
A. James Spung (*pro hac vice*)
Jason Husgen (*pro hac vice*)
Sarah L. Zimmerman (MDL registered)
Kate Ledden (MDL registered)
Tanner Cook (MDL registered)
HUSCH BLACKWELL LLP
190 Carondelet Plaza, Ste 600
St. Louis, MO 63105
Telephone: (314) 480-1500
aaron.chapin@huschblackwell.com
chris.smith@huschblackwell.com
tessa.jacob@huschblackwell.com
james.spung@huschblackwell.com
jason.husgen@huschblackwell.com
sarah.zimmerman@huschblackwell.com
kate.ledden@huschblackwell.com
tanner.cook@huschblackwell.com

Counsel for Triumph Foods, LLC

/s/ Mark L. Johnson

Mark L. Johnson (#0345520)
Davida S. McGhee (#0400175)
GREENE ESPEL PLLP
222 South Ninth Street, Suite 2200
Minneapolis, MN 55402
(612) 373-0830
mjohnson@greeneespel.com
dwilliams@greeneespel.com

Daniel Laytin, P.C. (*pro hac vice*)
Christa Cottrell, P.C. (*pro hac vice*)
Jenna Stupar (*pro hac vice*)
KIRKLAND & ELLIS LLP
300 North LaSalle
Chicago, IL 60654
(312) 861-2000

/s/ Craig S. Coleman

Richard A. Duncan (#0192983)
Aaron D. Van Oort (#0315539)
Craig S. Coleman (#0325491)
Emily E. Chow (#0388239)
Isaac B. Hall (#0395398)
FAEGRE DRINKER BIDDLE & REATH
LLP
2200 Wells Fargo Center
90 South Seventh Street
Minneapolis, MN 55402-3901
(612) 766-7000
richard.duncan@faegredrinker.com
aaron.vanoort@faegredrinker.com
craig.coleman@faegredrinker.com

daniel.laytin@kirkland.com
christa.cottrell@kirkland.com
jenna.stupar@kirkland.com

***Counsel for Clemens Food Group, LLC
and The Clemens Family Corporation***

emily.chow@faegredrinker.com
isaac.hall@faegredrinker.com

Jacob D. Bylund (*pro hac vice*)
Stephanie A. Koltookian (*pro hac vice*)
Robert C. Gallup (#0399100)
FAEGRE DRINKER BIDDLE &
REATH LLP
801 Grand Ave., 33rd Floor
Des Moines, IA 50309
(515) 248-9000
jacob.bylund@faegredrinker.com
stephanie.koltookian@faegredrinker.com
robert.gallup@faegredrinker.com

Jonathan H. Todt (*pro hac vice*)
FAEGRE DRINKER BIDDLE & REATH
LLP
1500 K Street NW, Suite 1100
Washington, DC 20005
(202) 842-8800
jonathan.todt@faegredrinker.com

John S. Yi (*pro hac vice*)
FAEGRE DRINKER BIDDLE & REATH
LLP
One Logan Square, Suite 2200
Philadelphia, PA 19103
(215) 988-2700
john.yi@faegredrinker.com

Counsel for Hormel Foods Corporation

/s/ Peter H. Walsh

Peter H. Walsh (#0388672)
HOGAN LOVELLS US LLP
80 South Eighth Street, Suite 1225
Minneapolis, MN 55402
(612) 402-3000
peter.walsh@hoganlovells.com

William L. Monts (*pro hac vice*)
Justin W. Bernick (*pro hac vice*)
HOGAN LOVELLS US LLP

/s/ Tiffany Rider Rohrbaugh

Tiffany Rider Rohrbaugh (*pro hac vice*)
Rachel J. Adcox (*pro hac vice*)
Lindsey Strang Aberg (*pro hac vice*)
Allison Vissichelli (*pro hac vice*)
AXINN, VELTROP & HARKRIDER LLP
1901 L Street NW
Washington, DC 20036
(202) 912-4700
trider@axinn.com
radcox@axinn.com

Columbia Square
555 Thirteenth Street, NW
Washington, D.C. 20004
(202) 637-5600
william.monts@hoganlovells.com
justin.bernick@hoganlovells.com

Counsel for Agri Stats, Inc.

lstrang@axinn.com
avissichelli@axinn.com

Jarod Taylor (*pro hac vice*)
AXINN, VELTROP & HARKRIDER LLP
90 State House Square
Hartford, CT 06103
(860) 275-8109
jtaylor@axinn.com

Craig M. Reiser (*pro hac vice*)
Kail Jethmalani (*pro hac vice*)
AXINN, VELTROP & HARKRIDER LLP
114 West 47th Street
New York, NY 10036
(212) 728-2200
creiser@axinn.com
kjethmalani@axinn.com

David P. Graham (#0185462)
DYKEMA GOSSETT PLLC
4000 Wells Fargo Center
90 South Seventh Street
Minneapolis, MN 55402
(612) 486-1521
dgraham@dykema.com

***Counsel for Tyson Foods, Inc., Tyson
Prepared Foods, Inc. and Tyson Fresh
Meats, Inc.***

/s/ Peter J. Schwingler

William L. Greene (#0198730)
Peter J. Schwingler (#0388909)
William D. Thomson (#0396743)
STINSON LLP
50 South Sixth Street, Suite 2600
Minneapolis, MN 55402
(612) 335-1500
william.greene@stinson.com
peter.schwingler@stinson.com
william.thomson@stinson.com

J. Nicci Warr (*pro hac vice*)
STINSON LLP
7700 Forsyth Blvd., Suite 1100
St. Louis, MO 63105
(314) 863-0800
nicci.warr@stinson.com

***Counsel for Seaboard Foods LLC and
Seaboard Corporation***